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ABSTRACT

Change in teaching practice is a popular theme in literacy education. A case study examined the nature of the change process in a teacher in a large Caribbean island school district who made a personal decision to change instructional practices from skills-based methods to whole language methods. Through data collection and analysis, a metaphor, "roller coaster," emerged to describe the teacher's change process. One major theme, "personal ambition," materialized through analysis, and subthemes that supported personal ambition clustered into a three-stage model. First, "dissatisfaction" and "opportunity" were intertwined to form the decision-making stage of the change process. Then, subthemes of "challenge," "risk-taking," and "growth and learning" formed the beginning stage of the change process. Finally, the subtheme "motivation," supported by student achievement and a personal support system, formed the continuation stage of the change process. In teacher education programs, teachers can be introduced to the change process to learn to use this knowledge and become more comfortable with change. Teachers can use knowledge about the change process to continue to learn and grow throughout their teaching career. (Contains 14 references and a figure illustrating the model of the change process.) (RS)

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Teacher in Transition: A Model of One Teacher's Change Process

Paper presented at National Reading Conference, San Diego

December 3, 1994

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Abstract

The purpose of this case study was to understand the nature of the change process in a teacher who made a personal decision to change instructional practices in the development of literacy from skills-based methods to whole language methods. Using the teacher's perspective and my own perspective as participant observer, I developed a model of the change process.

Through data collection and analysis, a metaphor, <u>roller coaster</u>, emerged to describe this teacher's change process. One major theme, <u>personal ambition</u>, materialized through analysis, and subthemes that supported personal ambition clustered into a three-stage model. First, <u>dissatisfaction</u> and <u>opportunity</u> were intertwined to form the decision-making stage of the change process. Then, subthemes of <u>challenge</u>, <u>risk-taking</u>, and <u>growth and learning</u> formed the beginning stage of the change process. Finally, the subtheme <u>motivation</u>, supported by student achievement and a personal support system, formed the continuation stage of the change process. This model adds to the body of research about teacher change.

Introduction

Change in teaching practice is a popular theme in literacy education. Much debate in the field of literacy centers around teachers' instructional changes from traditional teaching methods to whole language methods. While literacy professionals continue to write about and debate the issues surrounding literacy instruction, some teachers are changing instructional practices. Because change to whole language teaching is considered to be a movement led by teachers who read, reflect, and do research to make personal decisions about changing their teaching (Goodman, 1986, 1992), it is important to understand how a teacher arrives at the point of change and the process the teacher goes through to make that change.

Recent studies look at the teacher in researcher-initiated change processes (Hunsaker & Johnston, 1992; Pace, 1992; Sidani-Tabbaa & Davis, 1991; Wood, Cobb, & Yackel, 1991). Some studies examined how teachers enrolled in graduate courses changed their instructional practices (Hunsaker & Johnson,



1992; Newman, 1990; Pace, 1992; Sidani-Tabbaa & Davis, 1991), while other studies examined change in teachers who were introduced to new ideas through research projects (Wood, et al., 1991). However, few studies have been conducted to examine the change process in a teacher who independently decided to change his/her teaching practices.

Several studies illustrate emerging factors that are common in the change processes of teachers involved in implementing whole language programs. Teachers who reported on their own personal change processes described critical incidents and/or dissatisfaction with teaching practices that were crucial to making instructional changes. This dissatisfaction or dissonance arose when the teachers were confronted with new ideas that conflicted with their teaching practices (Newman, 1990; Routman, 1988). In other studies, teachers who were enrolled in graduate programs also experienced this dissonance as they encountered whole language theories in assigned readings and class discussions (Hunsaker & Johnston, 1991; Newman, 1990).

This study looks at an individual who decided to change literacy instructional practices. It differs from previous studies in that the impetus for change was not the result of graduate study, and the researcher did not introduce whole language theory or practices to the teacher in an effort to procipitate change. Rather, the teacher made a personal decision to change instructional practices.

Methodology

The purpose of this study was to understand the change process in a teacher who made a decision to change her instructional practices in the development of literacy from traditional, skills-based methods toward whole language. It was designed to illuminate the change process from the teacher's perspective and to document and interpret the changes taking place from a participant observer's perspective.

This study was carried out under the tradition of hermeneutic phenomenology (van Manen, 1990). In hermeneutic phenomenology, the researcher goes beyond description of what is, beyond description of the essence of the lived experience of the participants to provide interpretation of that experience. Thus, a hermeneutic phenomenological lens was appropriate in this study because the research questions centered on portraying and interpreting a teac er's change process and the phenomena seen in the change process. The two research questions that guided this study were:

1. What is the decision-making process that leads a teacher to change literacy instructional practices from skills-based to whole language instruction?



2. What is the change process a teacher goes through when adopting new practices?

Site and Participant

The site chosen is an elementary school (586 students, grades K-6) in a large Caribbean island school district. The school population is approximately 75* African-Caribbean and 25* Hispanic with most children coming from low-income families. Many children in the school speak a Dutch Creole dialect of English; however, there are children who come from homes where only Spanish is spoken. The literacy achievement of the students is considered to be in need of improvement by the both the administrators and teachers.

The assistant principal encouraged teachers to try whole language practices as a means to improve literacy achievement. Nine of the school's 41 teachers decided to try whole language in their classrooms. From this group, I purposively selected one teacher who met the following criteria:

(a) a teacher who had made a recent decision to change to whole language;

(b) a teacher whose decision to change was based on personal factors and not influences from graduate courses or mandates from the school district or administrators; and (c) a teacher who seemed willing to continue whole language instruction for several years. Ms. Houston is the pseudonym chosen for the teacher I selected for the study.

Data Collection

Three data sources were used to gain Ms. Houston's perspective of her change process. I conducted a series of interviews with Ms. Houston to discuss her change process. She kept a reflective journal in which she recorded her own thoughts about the process. She also kept a log professional readings completed, professional conferences attended, and any formal or informal meetings where literacy instructional strategies were discussed.

Since the perceptions of others within the school can add insight into a teacher's change process, I also conducted formal interviews with colleagues and administrators. Ms. Houston identified specific persons who made an impact on her by being supportive or critical of her change process for these interviews.

I observed Ms. Houston's daily routine in the classroom and recorded field notes. Observations were made one day per week for the entire school day. During these observations, I also collected artifacts such as student work and lesson plans.

Data Analysis

Data analysis combined the ideas of van Manen (1990) and Denzin (1989) and built on the notion that data analysis within hermeneutic phenomenology



was similar to reading and interpreting narrative text. Data were best understood by reading them in their entirety and thinking about the overall meaning derived from that first reading. It was then necessary to look for support for this global interpretation within the text. These supports became the themes for continued analysis. Once themes were formed, the data sources, as text, were read again to look for specific incidents and quotations that supported or disconfirmed the themes. This analytic process was done collaboratively with the teacher to include the emic perspective and to provide the researcher with an alternative interpretation. When data collection was completed, the description and interpretation was written and analyzed again using this same process.

Results and Discussion

Data analysis led to the interpretation of Ms. Houston's change process as a roller coaster. Using the roller coaster metaphor as an analysis model, one major theme and six subthemes emerged through data analysis. Through a process of searching for supportive and disconfirming evidence, I began to see linkages between themes which led me to combine them into three clusters. These three clusters then developed into a three-stage model of Ms. Houston's change process. In this section, I will describe and interpret the theme and subthemes as they are linked together, and I trace how they developed into the three stages of the change process.

Theme of Personal Ambition

Under the roller coaster metaphor, the major theme of personal ambition emerged through data analysis. Ms. Houston is a highly motivated individual. Her childhood, while not unhappy, was spent without parents in a Caribbean nation. She lived with an elderly woman without having the companionship of parents, siblings, or other close relatives. However, she excelled in school and felt a sense of academic accomplishment. This led her to aspire to become a teacher when she grew up. Because of her life situation, Ms. Houston left school with the equivalent of an eighth-grade education. Nonetheless, she had personal ambitions that led her to leave her country where educational opportunities were limited. She moved to a United States territory where there were more opportunities for education and career development. While working in a variety of jobs, Ms. Houston took job-training classes and worked toward obtaining a Graduate Equivalency Diploma (GED). A high-school diploma was required for getting a good job and getting ahead, and Ms. Houston worked to reach this goal. Although, at this time, she had given up thoughts of becoming a teacher, she was motivated to achieve. After receiving her GED,



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she was employed as a secretary in the office of the local Title I reading program. She said:

I worked in the Title I reading program, and that's where I got my influence. There were certain things I would have to do in the office that made me feel that I could do something more, something better, something more challenging. So I went to college and the opportunity was there. They allowed me to leave early to go to school, so I grabbed the opportunity. (Interview, 5/12/93).

Ms. Houston completed college in six years while working as a full-time secretary. She had a personal sense of ambition that led her to make the necessary time, energy, and financial investments for the completion of a bachelor of arts degree in education.

Ms. Houston also had a sense of ambition as a teacher, and it influenced her decision to change teaching practices. She wanted to do a good job and be effective as a teacher. She was seen by the assistant principal and the primary reading teacher at her school as an ambitious person who took initiative. The assistant principal, Ms. Smith, said that Ms. Houston did not receive support from her, but it seemed that "Ms. Houston took the initiative and did strive against the odds" (Interview, 1/20/94). Ms. Smith felt that Ms. Houston changed her teaching practices because of her own "initiative and drive" (Interview, 1/20/94).

The primary reading teacher, Ms. Carr, also felt that Ms. Houston's change was due to her own resources. In an interview, she said:

I was . . . asking Ms. Houston about how she got so involved, but I always know that Ms. Houston is a positive person. And she read up on her own. [She was] really studying on her own, and she said it was a lot of work. She has to stay up a lot at nights to work, but she enjoys it. (Colleague Interview, 9/10/93)

Ms. Houston worked hard to do a good job and took the initiative to change her teaching practices. This alone was not enough. There were subthemes under the umbrella of personal ambition that supported Ms. Houston's change process.

Dissatisfaction and Opportunity

Under the overarching major theme of personal ambition, the subthemes of dissatisfaction and opportunity intertwined to form the first stage of the change process, decision-making. Ms. Houston was dissatisfied with what she was doing and wanted to do a better job. When the assistant principal mentioned whole language, the opportunity to change her teaching practices presented itself. In her journal, she wrote:



At that time I had only three years of experience in the teaching profession. Already I felt something was missing. I used and followed the teacher's manuals as thoroughly as I possibly could. I used strategies and techniques that I acquired during my studies for the profession. . . But something was still lacking. Although my students were experiencing success academically, I didn't feel as effective as I always dreamed I would be. . . . I was 'dying' for a change. What the change would be, I didn't know. However, it would definitely be a change for the better. (Journal, 11/93)

This indicates that Ms. Houston took advantage of an opportunity to improve her teaching because she was dissatisfied with her instructional practices. She took advantage of the opportunity to change through her own personal sense of ambition. She decided to move into this change process from skills-based to whole language teaching practices using her own initiative.

Once the decision to change instructional practices was made, other subthemes emerged within the major theme of personal ambition. These subthemes formed the beginning stage of the change process.

Challenge, Risk-taking, and Growth and Learning

Within the theme of ambition, three other subthemes emerged at the beginning of Ms. Houston's change process. They were challenge, risk-taking, and growth and learning.

The word <u>challenge</u> was Ms. Houston's typology for her experience. When looking for the right word to describe her change process, Ms. Houston settled on challenge:

First of all, it wasn't easy. I would probably term this as a-What do I want to say? I'm trying to look for some kind of, like a
term, to name what I've been through. . . . But it's very
challenging. That's what I would say. It was a challenge (her
emphasis). Challenge, I think that is the best way I would
describe it. (Interview, 1/16/94)

During formal and informal interviews, Ms. Houston talked about the difficulty and uncertainty of the change process. This difficulty emerged from the frustrations and problems encountered while making changes in instructional practices and from the mixed messages that she received from her administration.

It was a struggle throughout the first year for Ms. Houston to reconcile whole language philosophy with the school testing program. The principal was interested in visible results from basal criterion-referenced assessment



instruments, yet the assistant principal was talking about whole language and portfolios. Ms. Houston planned activities using childrer's literature and then was asked to send students for tests in the various basal levels. This led her to go back into the basals to cover the skills to be tested. The problem of the basal tests was a source of frustration throughout the school year. Ms. Houston was challenged to simultaneously find ways to meet the needs of children through whole language teaching and to meet the needs of the school's accountability system.

By the middle of the second year this was less of a challenge because she felt confident enough in her instructional program to take the <u>risk</u> to abandon the basal and make explanations for alternative testing procedures for her students. The subtheme of risk-taking became evident in passages from her journal:

Although things didn't move as smoothly as was being planned, we were heading more in the direction of whole language than ever before. The students enjoyed their class. I felt happy that I took the <u>risks</u>. (Journal, 11/93)

Throughout this period, growth and learning were taking place for Ms. Houston. This subtheme was seen throughout the change process. She attended workshops and read about whole language practices in journals and teacher magazines.

Ms. Houston also learned about alternatives for assessing student progress and came to change what she valued in assessment from tests to student growth. She started using portfolios.

Other challenges remained, and they were met by taking risks and growing and learning. Two areas, planning and becoming a facilitator, were challenging for her. Planning was a challenge that came from the outside. The school administrators wanted lesson plans turned in biweekly and gave the teachers plan books for this purpose. The spaces in the book, however, were not appropriate for the thematic planning Ms. Houston wanted to do. A second challenge Ms. Houston faced and continues to face comes from within. She wants to be more facilitative in the classroom and wants students to have more responsibility.

Ms. Houston overcame the challenge of planning by taking a risk. She developed and used her own planning form instead of the usual plan book and it was accepted as exemplary by the school administration.

Ms. Houston now faces the challenge of being a more facilitative teacher. She made a variety of changes in her class by using children's literature, involving students in writing, and teaching thematically. In July, 1993, Ms.



Houston said that she wanted to be more of a facilitator instead of telling the students what to do. Yet, in January, 1994, Ms. Houston still struggled with this idea. Thus, the challenge of becoming more facilitative existed, but Ms. Houston felt confident she would be able to overcome it. She said:

I find that I still have to do a lot of talking, but I would say I have cut some of that down. And eventually I'll come, be able to come more of a facilitator than I am now. (Interview, 1/16/94)

This change process was not easy. It was a challenge, yet Ms. Houston continued with the process. In addition to ambition, motivational factors influenced her to continue.

Motivation

During data analysis, a new, yet related question evolved. If the change process was such a challenge, why did Ms. Houston continue? The process was difficult and challenging, yet she continued. Thus, within the theme of personal ambition, one subtheme emerged to answer the question: What part of the change process leads a teacher to continue with the process? This subtheme was motivation and it included two elements: student progress and a system of support.

There were several areas of student progress that Ms. Houston wrote about in her journal, and she felt that school administrators and parents were satisfied with the children's wor'..

I noticed a love for books developed among my students. Many students would come during their lunch time and go straight to the reading station to read. Students' writing improved significantly. The administration was pleased, and the parents were very much satisfied. (Journal, 11/93)

Ms. Carr, the primary reading teacher, also noted improved achievement. She stated:

I found no difference in them, and I found that they even did greater than the traditional classroom. The skills were greater. The testing skills and everything percentage-wise was much better. (Colleague Interview, 9/10/93)

Ms. Houston was pleased with her students' achievement and interest in reading and writing. She wanted this success to be noted, not only by her, but also by parents and the school administration. When this achievement was noticed, it motivated her to continue.

Along with achievement, support was important, and Ms. Houston worked to find a support base. She felt she did not have formal administrative support for what she was doing. She knew that everyone did not share her enthusiasm



toward whole language, but did not seem to let others' lack of enthusiasm influence her. The assistant principal felt the school climate was not supportive of change in general and of Ms. Houston specifically. In response to a question about the climate for change in the school, Ms. Smith said:

Well, I can only go on hearsay. It seems as though when someone is trying to do something different they have a lot of flak against them from those who are still stuck in that traditional-type mode. To try something new on this campus is rough, rough. I don't think that Ms. Houston had support from others. Sometimes Ms. Houston would share with them, and then she would get comments, negative comments, but I told her to continue and find her support base where that is. (Administrator Interview, 1/20/94)

Ms. Houston did find her own support base. In interviews, she identified three sources of support that coalesced to form her personal support system: the assistant principal, another teacher, and me.

Ms. Houston felt that the assistant principal was pleased with her work and recognized what she was trying to do.

The assistant principal supported my ideas one hundred percent. And also assured me that she would go along with any new ideas I had on whole language. I received praises and motivationals. (Journal, 11/93)

Ms. Smith, however, characterized her own support as limited. Although she said she was not supportive, she did offer praise which was important for Ms. Houston.

I don't think I've done much to be supportive of her except to offer the encouragement to try something new and try something different—just give her the praise which is very much warranted. I don't think I've been supportive. I try to give her praise. (Administrative Interview, 1/20/94)

Another source of support that Ms. Houston identified came from a colleague. She was the only other teacher at the school who used whole language teaching practices. This teacher was working on her master's degree with a concentration in reading. Ms. Houston and this teacher began to talk and share ideas with each other and grew to be part of each other's support systems.

Ms. Houston felt that my interest in her during this research study provided support, and she told me in an interview, "It helped me a great deal because I look forward to your coming, and make sure I am doing something that would be of interest for you" (Interview, 1/16/94). When talking informally,



Ms. Houston shared ideas with me and wanted my support for her instructional practices. In the beginning of the study, she asked me for assistance. At that time, I told her we would discuss any issues when the project was over. I did not want to influence her or provide formal support. Given the nature of the interaction between the researcher and the researched in an hermeneutic phenomenological study, some influence occurs, and it is important to know that the researcher was part of the teacher's support system.

Model of Change Process

The results of this investigation led to the development of a model of Ms. Houston's lived experience during the change process. Figure 1 shows the complete model with the roller coaster metaphor supporting the three stages of the change process. Within the metaphor of the roller coaster, the theme of personal ambition overrode Ms. Houston's change process. This personal ambition was a driving force on the roller coaster, and it propelled her through the change process. Subthemes clustered into three groups that led to defining the change process as a three-stage model. Dissatisfaction and opportunity interacted to form the decision-making stage of the change process. Then, subthemes of challenge, risk-taking, and growth and learning clustered together as Ms. Houston began her change process and moved into stage two, beginning to change. The subtheme motivation emerged and was supported by perceived student achievement and a personal support system. The connection of these motivational factors led Ms. Houston to continue the change process.



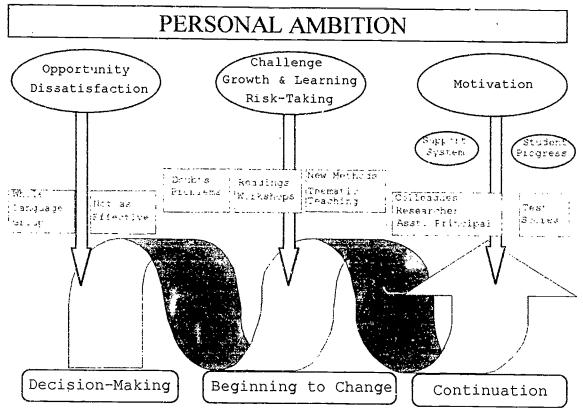


Figure 1. Model of the Change Process

Implications for Teachers and Teacher Education

The model of teacher change developed in this study expands the current is ormation that is available about teacher change. Because this study looked at self-initiated change in one teacher, the interpretations from this study can be applied to the grass-roots movement of individual teachers seen in the spread of whole language instruction. The implications of understanding a teacher's change process are also important for teacher education. In teacher education programs, teachers can be introduced to the change process to learn to use this knowledge and become more comfortable with change. Teachers can use knowledge about the change process to continue to learn and grow throughout their teaching career.

Self-Change in Teachers

This research is of particular importance in helping changing teachers understand their own change process because it demonstrates that a teacher can make a decision to change instructional practices, and with limited support, make those changes.

Being able to compare what one teacher has experienced may help other teachers understand and appreciate their own experiences. Ms. Houston read



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studies about teachers involved in change processes that focused on changing practices, and she talked about how helpful it was to see that someone else's change process was slow and difficult.

Understanding the process may also help changing teachers continue their efforts when they feel discouraged about their own progress. Because Ms. Houston termed the change process a challenge, others may benefit from seeing how she faced the challenge. It may also be beneficial for teachers to feel that the challenge can be met and overcome. It would help them see that, although the process is difficult, it is not impossible.

Informing Teacher Education

While the focus of this study was a teacher who made a personal decision to change teaching practices, there are also implications for teacher education that involve preparing teachers for change and developing flexibility toward change. Teacher educators need to help teachers understand the change process and its difficulties. If teachers know the process is difficult and has ups and downs, they may be better able to face these difficulties.

Teacher educators also need to encourage teachers to develop support systems. Support for teachers changing instructional practices was seen as a vital part of the change process in this study and other change studies. In a study conducted by Pace (1992), teachers who were not supported by administrators or colleagues compromised or gave up on their changes. Ms. Houston, however, developed a personal support system of one administrator, one teacher, and the researcher. Ms. Houston's experience demonstrates that teachers can be encouraged to find support from a variety of sources. As Ms. Houston's assistant principal said, "She must continue and find her support base where that is" (Administrator Interview, 1/20/94). Through teacher education programs, teachers must learn to find support from whatever sources are available.

Teacher educators can also encourage teachers to evaluate instructional practices. Student progress was important for Ms. Houston and was an important factor for teachers in other studies to continue in an instructional change process (Guskey, 1986; Santa, 1988). Documentation of increased student achievement provided motivation for Ms. Houston to continue to incorporate new teaching practices in her classroom.

Involving Reluctant Teachers

There are practicing teachers who are reluctant to change, and results from this study can also inform change agents and teacher educators to involve reductant teachers in the change process.



The information from this study and the findings of Howser (1989) and Richardson (1990) suggest that teachers who are reluctant to change need opportunities to take risks in order to learn and grow, and they need time to change. In a study of teachers who were reluctant to change, reluctant teachers were found to have the same needs as teachers who were more open to change. Both groups wanted support for changes, encouragement from administrators, and wanted their learning to be related to their needs (Howser, 1989). Ms. Houston had similar needs.

Another important component of the change process for reluctant teachers is found in the decision-making phase. In order to make a decision to change, teachers must see a need to make a change. They must be introduced to new information that may cause dissatisfaction with what they are doing, or they must be shown that students are not achieving as well as they could be. If teachers feel no need to change, they will not change (Howser, 1989).

Reluctant teachers, as all teachers involved in a change process, need a support system to continue. They need support from administrators. They need to feel that administrators will support them as they take risks to try new practices. Administrators need to provide opportunities for reluctant teachers to learn and grow through professional readings, workshops, and discussions with other teachers. Teachers who are reluctant to change need to see that the new practices they are using translate into improved student achievement.



References

- Denzin, N. K. (1989). Interpretive interactionism. Newbury Park, CA: Sage.
- Goodman, K. (1986). What's whole in whole language? Portsmouth, NH: Heinemann.
- Goodman, K. (1992). I didn't found whole language. The Reading Teacher, 46(3), 188-199.
- Guskey, T. R. (1986). Staff development and the process of teacher change. Educational Researcher, 15(4), 5-12.
- Howser, M. A. (1989). Reluctant teachers: Why some middle-aged teachers failed to learn and grow. Eugene, OR: University of Oregon.
- Hunsaker, L., & Johnston, M. (1992). Teacher under construction: A collaborative case study of change. <u>American Educational Research Journal</u>, 29(2), 350-372.
- Newman, J. (1990). Finding our own way. Portsmouth, NH: Heinemann.
- Pace, G. (1992). Scories of teacher-initiated change from craditional to whole language literacy instruction. The Elementary School Journal, 92(4), 461-476.
- Richardson, V. (1990). Significant and worthwhile change in teaching practice. <u>Educational Researcher</u>, 19(7), 10-18.
- Routman, R. (1988). Transitions. Portsmouth, NH: Heinemann.
- Santa, C. M. (1988). Changing teacher behavior in content reading through collaborative research. In S. J. Samuels & P. D. Pearson (Eds.), Changing school reading programs: Principles and case studies (pp. 185-204).

 Newark, DE: International Reading Association.
- Sidani-Tabbaa, A., & Davis, N. T. (1991, February). Teacher empowerment through change: A case study of a biology teacher. Paper presented at the Annual Meeting of the Association of Teacher Educators, New Orleans. (ERIC Document Reproduction Service No. ED 330 670)
- van Manen, M. (1990). Researching lived experience. London, ON: University of Western Ontario.
- Wood, T., Cobb, P., & Yackel, E. (1991). Change in teaching mathematics: A case study. American Educational Research Journal, 28(3), 587-616.

